Persistence rate (%) was defined as the number of days between first biologic prescription and last biologic encounter, divided by 365 and multiplied by 100. Two mutually exclusive cohorts were defined based on their persistence rates: patients with persistence >=80% and patients with persistence <80%. Total health care and medical costs were assessed during the study period. Per patient per month (PPPM) costs were calculated. Cost of adverse events could not be identified separately in this analysis. A multivariate model was used to adjust for covariates including age, gender, Charlson Co-morbidity Index (CCI), and pre-index period health care costs. **RESULTS:** In all, 358 patients were included, 206 (57.5%) with a persistence rate <80% and 152 (42.5%) with a persistence rate >=80%. Nearly half were female and the mean age was 45.2 years. The higher persistence cohort had lower PPPM medical costs ($359.54 versus $407.14) and total health care costs ($1541.56 versus $2653.30) compared with the lower persistence cohort. Also, the multivariate analysis indicated that after adjusting for the confounding factors: age, gender, CCI, and pre-index period health care costs, a higher persistence rate is significantly associated with lower total health care PPPM costs ($P < 0.0001$). **CONCLUSION:** A higher persistence rate with anti-TNF therapy is associated with lower health care costs. Future studies to examine the impact of persistence with anti-TNF therapy on clinical and humanistic outcomes in patients with PsA are recommended.

ARTHRITIS—Health Care Use & Policy Studies

PAR26

THE UNINTENDED CONSEQUENCES OF WITHDRAWING DRUGS FROM THE MARKET

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OBJECTIVES: On September 30, 2004, rofecoxib—a drug used to treat inflammation—was voluntarily withdrawn from the US market due to mounting evidence of increased cardiovascular (CV) risk. This study sought to assess movement in the number of clinically appropriate (CAP) cyclo-oxygenase (COX)-2 prescriptions dispensed after the rofecoxib withdrawal; and whether patients with CAP profiles demonstrated different post-withdrawal switching behavior or incurred different levels of health care costs. **METHODS:** Administrative claims data from four regional health plans were used. To examine differences in clinically appropriate prescribing pre- and post-rofecoxib withdrawal, a generalized estimating equations approach was used. **RESULTS:** Based on a total of 317,762 prescriptions, this study found that CAP prescribing rates were lower after news of the increased drug risk, as were the total number of COX-2 prescriptions that were clinically inappropriate. Patients with CAP risk were more likely to exhibit switching behavior by filling prescriptions for nonselective (ns) NSAIDs or discontinuing use of all NSAIDs. Health care costs incurred in the year following the rofecoxib withdrawal were lower for patients who were prescribed COX-2s appropriately. **CONCLUSION:** These findings suggest that the widespread coverage of the rofecoxib withdrawal, which led to heightened awareness of the drug's risk affected consumer demand for COX-2s and may have had unintended consequences in reducing the number of patients who "should have been" receiving these medications according to clinical risk. Because patients and physicians were forced to make a medical decision under risk, increased information of the benefit-risk tradeoff may have been helpful and may have contributed to greater consumer welfare.

PAR27

WITHDRAWAL OF ROFECOXIB FROM THE MARKET; THERAPEUTIC AND ECONOMIC IMPLICATION FOR THE NETHERLANDS

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OBJECTIVES: Pharmacovigilance is a very important tool for registration authorities and pharmaceutical industries to gather extra information on effectiveness and adverse effects of widely used drugs. Therefore, post-marketing research can lead to new insights on therapeutic usability and consequently changes in registration files or even result in market withdrawal. In September 2004, rofecoxib was withdrawn from the market for reasons of serious cardiovascular adverse events. Our objective was to evaluate trends in market-share and expenditures of cyclooxygenase-2 (cox-2) selective and non-selective NSAIDs around market withdrawal of rofecoxib. **METHODS:** Analyses were conducted using pharmacy prescription data from IADB.nl (50 pharmacies), covering a Dutch population of 500,000 subjects. NSAID-use was calculated per 10,000 of the population and presented quarterly from 2000–2006. Expenditures related to NSAID-use were calculated and presented in costs per 1000 of the population. **RESULTS:** After market introduction of cox-2 selective NSAIDs, proportional use increased to a maximum of 17% in the third quarter of 2004. After market withdrawal of rofecoxib, the number of subjects receiving celecoxib and etoricoxib increased enormously (from 22 to 48 and 18 to 28 subjects per 10,000 population, respectively), but decreased shortly thereafter. Similar results were found for new users. After market withdrawal, costs per 1000 population decreased with 65% and 24% for cox-2 selective and the total group of NSAIDs, respectively. During additional study follow-up, costs per DDD were generally increasing for cox-2 selective and decreasing for other NSAIDs. Further results will be presented on switching patterns from rofecoxib to other NSAIDs, with a specific focus on concomitant use of proton-pump-inhibitors for gastrointestinal protection and related extra costs. **CONCLUSION:** Withdrawal of rofecoxib from the Dutch market resulted in a decreasing number of subjects receiving cox-2 selective NSAIDs (class-effect) and lower expenditures for the whole group of NSAIDs. Further research is currently conducted to complete the full economic picture.

PAR28

GEOGRAPHICAL VARIATION OF PHARMACOLOGICAL PRESCRIPTION WITH BAYESIAN HIERARCHICAL MODELS

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OBJECTIVES: The pharmacological prescription can present geographical variation due to multiple factors. The aim of this communication is to introduce the spatial variability in the evaluation of different individual outcomes. **METHODS:** Pharmacological prescription data of 10,410 persons with diagnosis of osteoarthrosis were analyzed. The prescriptions were fulfilled during the year 2006 in the health department 11 of the Comunitat Valenciana (Spain). The number of recipes, the number of prescribed principles and the pharmaceutical expense for every patient were evaluated. The relationship with gender and age was explored by means of generalized linear models. The geographical variation between different administrative units is introduced by means of heterogeneity and structured random effects. The proposed hierarchical models were analyzed using Bayesian methods with MCMC procedures. **RESULTS:** Models with random spatial effects explain an important part of the variabil-